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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,981	12/26/2001	Gail G. Huang	91436-349	7802
22463	7590	07/27/2005	EXAMINER	
SMART AND BIGGAR 438 UNIVERSITY AVENUE SUITE 1500 BOX 111 TORONTO, ON M5G2K8 CANADA			DAVIS, CYNTHIA L	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**Application No. **10/025,981**

Applicant(s)

HUANG, GAIL G.

Examiner

Cynthia L Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/23/2002</u> .   | 6) <input type="checkbox"/> Other: ____                                     |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-6 and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Chaudhuri.

Regarding claim 1, receiving a request to set up a label switched path segment over a direct connection between a head end node and a tail end node, said request specifying a required protection bandwidth for said label switched path segment is disclosed in Chaudhuri, paragraph 8 (disclosing MPLS being used in the network) and paragraph 16 (disclosing requesting lightpaths and restoration paths). Determining a backup route to said tail end node, responsive to said receiving, where said backup route avoids use of said direct connection between said head end node and said tail end node is disclosed in paragraph 19. Signaling to reserve said required protection bandwidth along said backup route; receiving confirmation of reservation of said required protection bandwidth; and generating a backup connection map, where said backup connection map associates a label related to said label switched path segment with an initial link in said backup route is disclosed in paragraphs 96 (disclosing calculating the initial link, or next node) and 98 (disclosing mapping the primary and restoration lightpaths).

Regarding claim 2, responsive to said receiving said request, signaling to establish said label switched path segment over said direct connection, generating a working connection map, where said working connection map associates a label related to said label switched path segment with said direct connection, and switching incoming traffic according to said working connection map is disclosed in paragraphs 16 (disclosing requesting a working path), 43 (disclosing signaling), and 98 (disclosing mapping the working path).

Regarding claim 3, receiving a link failure notification for said direct connection, and responsive to said receiving said link failure notification, switching incoming traffic according to said backup connection map is disclosed in paragraph 19 (disclosing restoring the failed path using the backup path).

Regarding claim 4, before said switching incoming traffic according to said backup connection map, selecting a backup bundle, where a backup bundle is a logical association of backup label switched paths that follow a single predetermined route to said tail end node is disclosed in Chaudhuri, paragraph 79 (the restoration path is identified, it follows a predetermined route in the label-switched network) and 92 (each path contains a plurality of wavelengths, which are backup bundles that follow a single route). Determining whether protection bandwidth is in use on said selected backup bundle, and where said protection bandwidth is not in use on said selected backup bundle, activating a backup connection map corresponding to use of said backup bundle is disclosed in paragraph 92 (the wavelength availability vector indicates whether the bandwidth is available for use or not).

Regarding claim 5, where said protection bandwidth is not in use on said selected backup bundle, marking said protection bandwidth as being used is disclosed in paragraph 92 (if a wavelength on a path is being used, it is marked as unavailable).

Regarding claim 6, said marking includes an identification of said selected backup bundle is disclosed in paragraph 92 (the unavailable marking indicates the unavailable wavelength, which is its identification).

Regarding claim 8, a head end node in a mesh network comprising: a plurality of input ports, a plurality of output ports, a connection processor adapted to connect selected ones of said plurality of input pods to selected ones of said plurality of output ports according to a working connection map is disclosed in Chaudhuri, figure 1 (showing OLXCs with input and output ports and routing logic). Receiving a request to set up a label switched path segment over a direct connection between a head end node and a tail end node, said request specifying a required protection bandwidth for said label switched path segment is disclosed in Chaudhuri, paragraph 8 (disclosing MPLS being used in the network) and paragraph 16 (disclosing requesting lightpaths and restoration paths). Determining a backup route to said tail end node, responsive to said receiving, where said backup route avoids use of said direct connection between said head end node and said tail end node is disclosed in paragraph 19. Signaling to reserve said required protection bandwidth along said backup route; receiving confirmation of reservation of said required protection bandwidth; and generating a backup connection map, where said backup connection map associates a label related to said label switched path segment with an initial link in said backup route is disclosed

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in paragraphs 96 (disclosing calculating the initial link, or next node) and 98 (disclosing mapping the primary and restoration lightpaths).

Regarding claim 9, means for receiving a request to set up a label switched path segment over a direct connection between a head end node and a tail end node, said request specifying a required protection bandwidth for said label switched path segment is disclosed in Chaudhuri, paragraph 8 (disclosing MPLS being used in the network) and paragraph 16 (disclosing requesting lightpaths and restoration paths). Means for determining a backup route to said tail end node, responsive to said receiving, where said backup route avoids use of said direct connection between said head end node and said tail end node is disclosed in paragraph 19. Means for signaling to reserve said required protection bandwidth along said backup route; means for receiving confirmation of reservation of said required protection bandwidth; and means for generating a backup connection map, where said backup connection map associates a label related to said label switched path segment with an initial link in said backup route is disclosed in paragraphs 96 (disclosing calculating the initial link, or next node) and 98 (disclosing mapping the primary and restoration lightpaths).

Regarding claim 10, a computer readable medium containing computer-executable instructions which, when performed by a connection processor in a head end node in a communications network is disclosed in Chaudhuri, figure 1 (showing OLXCs with input and output ports and routing logic, which would be executed by a computer readable medium and a processor). Receiving a request to set up a label switched path segment over a direct connection between a head end node and a tail

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end node, said request specifying a required protection bandwidth for said label switched path segment is disclosed in Chaudhuri, paragraph 8 (disclosing MPLS being used in the network) and paragraph 16 (disclosing requesting lightpaths and restoration paths). Determining a backup route to said tail end node, responsive to said receiving, where said backup route avoids use of said direct connection between said head end node and said tail end node is disclosed in paragraph 19. Signaling to reserve said required protection bandwidth along said backup route; receiving confirmation of reservation of said required protection bandwidth; and generating a backup connection map, where said backup connection map associates a label related to said label switched path segment with an initial link in said backup route is disclosed in paragraphs 96 (disclosing calculating the initial link, or next node) and 98 (disclosing mapping the primary and restoration lightpaths).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhuri in view of Eslambolchi.

Regarding claim 7, said marking includes an indication of a priority of traffic associated with said backup bundle is missing from Chaudhuri. However, Eslambolchi discloses in column 4, lines 18-24, calculating restoration paths based on traffic priority.

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It would have been obvious to one skilled in the art at the time of the invention to indicate traffic priority in the system of Chaudhuri so that it could be used in the manner of Eslambolchi. The motivation would be to route high priority traffic before lower priority traffic (Eslambolchi, column 4, lines 21-24).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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